

**Amendments to the Claims:**

*This listing of claims replaces all prior versions, and listings, of claims in the application:*

1. (CURRENTLY AMENDED) A hybrid fiber coax (HFC) network comprising:

a combiner and splitter network;

a plurality of network elements operable for communicating telephony signals, Internet Protocol (IP) data signals, and video signals with customer-premises equipment of subscribers via the combiner and splitter network;

wherein the customer-premises equipment of a subscriber includes a network interface unit (NIU), a cable modem, and a set-top-box (STB);

wherein the plurality of network elements includes host digital terminals (HDTs) for communicating telephony signals with the NIUs of the subscribers via the combiner and splitter network, cable modem termination systems (CMTSs) for communicating IP data signals with the cable modems of the subscribers via the combiner and splitter network, and sets of video equipment for communicating video signals with the STBs of the subscribers via the combiner and splitter network;

wherein the combiner and splitter network combines the telephony signal, the IP data signal, and the video signal communicated from the network elements for the customer-premises equipment of a subscriber into a combined subscriber signal, and then provides the combined subscriber signal to the customer-premises equipment of the subscriber;

wherein the NIU, the cable modem, and the STB of the subscriber respectively extract the telephony signal, the IP data signal, and the video signal from the combined subscriber signal;

a service, design, and inventory (SDI) database operable for storing data indicative of the configuration of the network elements and the customer-premises equipment of the subscribers, for storing data indicative of assigned capacity of the network elements, and

for storing data indicative of the physical and logical connections between the network elements themselves and with the customer-premises equipment of the subscribers; and

an online provisioning application link (OPAL) operable with the SDI database to access the stored data for automatically, without manual intervention, provisioning selected ones of the network elements with the customer-premises equipment of a given subscriber based on the configuration of the network elements and the customer-premises equipment of the given subscriber and based on the assigned capacity of the network elements such that the provisioned network elements and the customer-premises equipment of the given subscriber are physically and logically connected in order to enable communication of the telephony, IP data, and video signals between the network elements and the customer-premises equipment of the given subscriber via the combiner and splitter network;

the SDI database is operable with the OPAL in order to automatically update, without manual intervention, the stored data indicative of the configuration of the network elements and the customer-premise equipment of the subscribers, the assigned capacity of the network elements, and the physical and logical connections between the network elements themselves and with the customer-premises equipment of the subscribers to account for the automated provisioning of the provisioned network elements with the customer-premises equipment of the given subscriber;

a fault manager having an alarm visualization tool operable with a HFC network manager and the SDI database for generating visual displays of the status and configuration of the network elements and the customer-premises equipment of the subscribers; and

wherein the alarm visualization tool is a web-based graphics tool that includes a spatial database that relates alarm information from the HFC network manager with network configuration data from the SDI database, geo-coded homes passed information, and landbase and spatial data.

2. (ORIGINAL) The HFC network of claim 1 further comprising:  
an HFC network manager for monitoring status of the network elements and the customer-premises equipment, for controlling configuration of the network elements and the

customer-premises equipment, and for monitoring the configuration of the network elements and the customer-premises equipment.

3. (CANCELLED)

4. (PREVIOUSLY PRESENTED) The HFC network of claim 3 further comprising:

a trouble ticket system operable with at least one of the HFC network manager and the fault manager for generating trouble ticket alerts in response to improper status of at least one of the network elements and the customer-premises equipment.

5. (ORIGINAL) The HFC network of claim 4 wherein:

the HFC network manager updates the improper status of the at least one of the network elements and the customer-premises equipment to a proper status after the trouble ticket alert has been addressed.

6. (ORIGINAL) The HFC network of claim 3 further comprising:

a trouble ticket system operable with at least one of the HFC network manager and the fault manager for generating trouble ticket alerts in response to improper configuration of at least one of the network elements and the customer-premises equipment.

7. (PREVIOUSLY PRESENTED) The HFC network of claim 6 wherein:

the HFC network manager updates the improper status of the at least one of the network elements and the customer-premises equipment to a proper status after the trouble ticket alert has been addressed.

8. (CANCELLED)

9. (PREVIOUSLY PRESENTED) The HFC network of claim 1 wherein:

the network elements further include a fiber optics node connected at one end to the combiner and splitter network by a fiber optics network and connected at the other end to the customer-premises equipment by coax.

10. (ORIGINAL) The HFC network of claim 1 further comprising:  
an order manager operable with the OPAL for monitoring the provisioning of HFC network elements with customer-premises equipment by OPAL.